Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

In the Matter of	)	
	)	
Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion	)	GN Docket No. 18-238

COMMENTS OF THE FIBER BROADBAND ASSOCIATION ON THE FOURTEENTH BROADBAND DEPLOYMENT REPORT NOTICE OF INQUIRY

The Fiber Broadband Association ("Fiber Broadband" or "Association") hereby submits comments in response to the Federal Communications Commission's (the "Commission's") Fourteenth Broadband Deployment Report Notice of Inquiry ("NOI") in the above-captioned proceeding.[1] As explained herein, the Association agrees that the Commission should utilize a "progress-based approach" to carry out its obligations under Section 706 of the Communications Act and assess the "availability of advanced telecommunications capability to all Americans in a reasonable and timely fashion."[2] At the same time, Fiber Broadband submits that the Commission should acknowledge that consumers increasingly are focusing on broadband experience, not just service speeds, and therefore should measure deployment progress and availability based on a more holistic broadband experience metric that includes service reliability and latency. Additionally, because consumers and service providers understand that all-fiber networks are essential to providing a superior experience for broadband and other advanced

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1 *See Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 18-238, Fourteenth Broadband Deployment Report Notice of Inquiry, FCC 18-119 (rel. Aug. 9, 2018).

2 47 U.S.C. § 1302.

telecommunications services, the Commission also should focus its assessment on progress in deployment of all-fiber connectivity.

A Progress-Based Approach to Evaluating the Availability of Advanced Telecommunications Capability Is Appropriate

The NOI explains that for the *2018 Broadband Deployment Report*, Commission staff "refocused its analysis … on the progress made year-over-year in the deployment of fixed and mobile services," and seeks comment on utilizing a progress-based approach for its next report.[3] The Association agrees that evaluating the availability of advanced telecommunications capability based on ongoing progress in deployment is a more productive approach to achieving the goals of Section 706, since it will reflect the pace at which advance telecommunications capability is being deployed and enable reasonable projections about future activities. That said, the Commission should recognize that the definition of advanced telecommunications capability will evolve over time to reflect consumer demands and provider capabilities. While providers should not be asked to "hit a moving target," they should be reasonably expected to provide network capabilities that consumers demand and they can offer, which would be a market-driven process. In addition, to help it develop more precise policies, the Commission should evaluate progress on both a national and more granular basis. In particular, the Commission should assess and publish progress in each census block by comparing it to various benchmarks for reasonable and timely deployment, including by comparing urban to rural deployments, domestic to international (accounting for different demographics, geography, and other factors), and current to previous network technology deployments.

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[3] NOI ¶¶ 3, 6.

The Commission Should Develop a Broadband Experience Metric to Conduct its Review of Deployment Progress and Should Focus its Review on the Availability of All-Fiber Networks

The NOI next proposes to evaluate progress based on several service speed benchmarks.[4] However, service speeds (particularly download speeds) are becoming less relevant for consumers and providers, and do not provide the basis for the Commission having a long-term vision for promoting deployment of advanced telecommunications services across the U.S.[5] Rather, consumers are focusing much more on their overall broadband experience, which includes not only download speeds, but also reliability/uptime, upload speeds, and latency. Indeed, in a May 2018 consumer survey conducted for Fiber Broadband by market research firm RVA, LLC, 87 percent of consumers rated reliable service/few interruptions as a "very important" attribute of their broadband service, compared to 73 percent who rated fast/higher Internet speeds as "very important."[6] The Association therefore urges the Commission to consider developing a more holistic broadband experience metric that includes factors such as service reliability and latency, in addition to speed, for purposes of measuring broadband deployment progress. Such an approach will better reflect consumer expectations and the industry's response to those expectations in deploying advanced telecommunications capability.

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4 *Id*. ¶ 7.

5 Verizon correctly observed in 2017 that "[r]epeated resetting of speed benchmarks and evaluating progress according to those artificial thresholds hampers the ability to ensure that consistent progress is made over time." Thus, "the Commission should avoid becoming distracted by the selection of one or more specific speed thresholds and should instead focus on evaluating the steady and continued deployment of ever more advanced services." Comments of Verizon on the Thirteenth Section 706 Report Notice of Inquiry, GN Docket No. 17-199, 13 (filed Sept. 21, 2017).

6 *See* Michael Render, RVA LLC, "North American Fiber Optic Broadband: Exciting New Milestones (presentation at Fiber Connect, June 2018) (RVA 2018 Data). Additionally, nearly half of consumers surveyed reported low latency as also being "very important."

Additionally, despite its desire to employ a technology-neutral approach, the Commission should recognize that consumers understand the value of all-fiber networks and increasingly demand them. Thus, again following the market, the Commission should, as part of its effort to measure advanced telecommunications capabilities, examine progress in the deployment of all-fiber networks. It is well-documented that consumers of residential, commercial and wireless broadband have an ever-increasing demand for a superior experience from traditional broadband service,[7] and understand that fiber-based services offer such an experience.[8] There is also an industry-wide consensus that these networks will need to support enormous data flows engendered by video transmissions and as the Internet of Things ("IoT") and other innovative devices get connected.[9] Networks with fiber end-points (*e.g.*, homes, commercial buildings, community institutions, wireless sites, IoT sensors) have a wide array of applications, provide virtually unlimited, symmetrical bandwidth to consumers, and are readily scalable to higher speeds simply by upgrading modulating electronics.[10] Additionally, all-fiber networks do and

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7 *See* RVA 2018 Data (finding that consumers surveyed average 5.3 hours online at home per day; there are between 4.7 and 8.9 reported online devices in the home depending on the age demographic; those under age 35 get about half of their video content online; and that those who normally have a commute time of more than 60 minutes were able to reduce their commute time by 27 percent monthly by working from home using broadband connectivity an average of 5.4 times per month).

8 According to the RVA 2018 Data, all-fiber users are far more satisfied than cable modem and DSL users in all aspects, including reliability and download and upload speed. *See* RVA 2018 Data.

9 In its June 2018 Mobility Report, Ericsson forecasts that by 2023, there will be a total of 31.4 billion connected devices (including IoT devices and mobile phones). *See* "Ericsson Mobility Report" (June 2018) *available at* https://www.ericsson.com/assets/local/mobility-report/documents/2018/ericsson-mobility-report-june-2018.pdf.

10 The Association recognizes that other transmission facilities, such as hybrid fiber-coax, also enable high-speed broadband service. However, even cable operators understand that the physical transmission medium of coaxial cable will be replaced by fiber because

increasingly will facilitate consumers' increasing reliance on Wi-Fi and eventually 5G to engage with mobile applications and services, such as real-time video.[11]

As a result, providers are ratcheting up their investment in all-fiber networks and are touting this superior service capability to keep current customers and attract new ones. According to research conducted for the Association by RVA, LLC, in 2017, the growth rate for homes marketed with fiber to the home ("FTTH") services rose by approximately 15 percent, and approximately 34.5 million homes in the U.S. were passed by fiber.[12] Providers also continue to expand their fiber footprints for commercial services, which for the first time cover more than half of the buildings in the U.S.,[13] and to support wireless backhaul, most of which will soon have fiber connections.[14] These deployments and network expansions were undertaken

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of its superior performance and operational characteristics and are accelerating their deployment of all-fiber infrastructure.

11 The Commission has noted that developments in wireless networks will depend on the availability of fiber backhaul. *See Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund*, WC Docket Nos. 11-42, 09-197, 10-90, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, Second Report and Order, Memorandum Opinion and Order, FCC 15-71, ¶ 45 & n.134 (rel. June 22, 2015).

12 *See* RVA 2018 Data. Available data also shows that among those that currently have a fiber connection in the U.S., nearly one fifth have at least two, and in some cases three or more options for service providers. *See id*.

13 According to Vertical Systems Group, by the end of 2017, more than half of the commercial multi-tenant and company-owned buildings in the U.S. with twenty or more employees were fiber-lit. *See* "STATFlash: U.S. Business Fiber Availability Reaches 54.8%," Vertical Systems Group (Apr. 5, 2018) *available at* https://www.verticalsystems.com/2018/04/05/u-s-business-fiber-availability-reaches-fifty/. Additionally, ten wholesale and retail fiber providers had 10,000 or more on-net fiber lit commercial buildings in the U.S., and another twelve providers offered lit fiber connections to between 2,000 and 9,999 U.S. commercial buildings. "2017 U.S. Fiber Lit Buildings LEADERBOARD," Vertical Systems Group (Apr. 26, 2018) *available at* https://www.verticalsystems.com/2018/04/26/2017-fiber-lit-leaderboard/.

14 IHS Markit projected that by 2020, nearly 50 percent of all global mobile backhaul will be supported by fiber connections. *See* Dan Meyer, "5G and LTE-A set to power mobile

by a wide swath of service providers, ranging from large incumbents[15] and new entrants,[16] to regional and rural providers of broadband,[17] to States and local communities.[18] Therefore, to fulfill the mandate set forth in Section 706, the Commission should take its direction from the

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backhaul market out of current doldrums," RCRWireless (Nov. 1, 2016) *available at* https://www.rcrwireless.com/20161101/carriers/5g-lte-set-power-mobile-backhaul-market-current-doldrums-tag2. *See also* Patrick Brogan, "U.S. Internet Usage and Global Leadership Are Expanding," USTelecom (Nov. 27, 2017), *available at* https://www.ustelecom.org/sites/default/files/documents/USTelecom%20IP%20Usage%202016.pdf ("With fourth ("4G") generation wireless networks, backhaul has increasingly transitioned from traditional copper lines to fiber connections. The trend toward fiber backhaul will continue with the roll out of 5G wireless networks in the coming years, which will require deployment of smaller cells serving smaller geographic areas. Cellular networks will connect small cells via fiber deployed deeper into the network to accommodate the large anticipated volumes of traffic.").

15 *See, e.g.*, Kendra Chamberlain, "Verizon is a 'fiber giant' for 5G, report says," FierceWireless (Aug. 8, 2018), *available at* https://www.fiercewireless.com/tech/verizon-a-fiber-giant-for-5g (reporting that "Verizon now has 900,000 global fiber route miles" and noting that "Verizon had previously announced fiber build-outs in 50 markets outside its ILEC footprint, which will serve to prepare the company's networks for 5G."); *see also* Sean Buckley, "Cincinnati Bell reaches 70% of Cincinnati's homes, businesses with fiber," FierceTelecom (Feb. 16, 2018), *available at* https://www.fiercetelecom.com/telecom/cincinnati-bell-reaches-70-cincinnati-s-homes-businesses-fiber.

16 In August 2018, GoNetspeed announced it had completed the buildout of its initial network in West Hartford, New Haven and Bridgeport, Connecticut. *See* "GoNetspeed Now Offering High-Speed Fiber Optic Internet in Select Connecticut Neighborhoods," Fiber Broadband Association (Aug. 28, 2018), *available at* https://www.fiberbroadband.org/blog/gonetspeed-now-offering-high-speed-fiber-optic-internet-in-select-connecticut-neighborhoods.

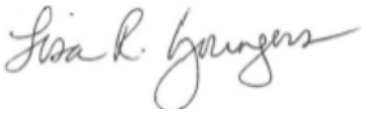
17 In Illinois, i3 Broadband plans to be able to serve more than 10,000 homes in Champaign and Urbana by the end of 2018. *See* "UC2B and i3 Broadband's Champaign-Urbana Fiber Network Growth Continues," i3 Broadband (Jan. 16, 2018), *available at* https://i3broadband.com/news/uc2b-and-i3-broadbands-champaign-urbana-fiber-network-growth-continues/.

18 The town of Erwin, Tennessee recently announced that it expects to complete the final phase of its community-wide fiber network in early 2020. *See* Hannah Bonestroo, "Final Phase of Gigabit FTTH Deployment Begins in Erwin," Community Networks (Sept. 5, 2018), *available at* https://muninetworks.org/content/final-phase-gigabit-ftth-deployment-begins-erwin.

market and evaluate the progress of deployment of advanced telecommunications capability based on the presence of "all-fiber" networks.

Respectfully Submitted,

FIBER BROADBAND ASSOCIATION



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September 17, 2018